Title (en)

PROGRAMMABLE LOGIC DEVICE WITH REGIONAL AND UNIVERSAL SIGNAL ROUTING

Title (de)

PROGRAMMIERBARE LOGIKVORRICHTUNG MIT REGIONALER UND UNIVERSELLER SIGNALWEGLENKUNG

Title (fr)

DISPOSITIF LOGIQUE PROGRAMMABLE A ACHEMINEMENT DE SIGNAUX UNIVERSELS ET REGIONAUX

Publication

**EP 0707721 A4 19980617 (EN)**

Application

**EP 95917791 A 19950502**

Priority

• US 9505436 W 19950502
• US 23815694 A 19940504

Abstract (en)

[origin: WO9530952A1] A programmable logic device having a plurality of logic cells (151-15N) arranged in groups defining separate logic regions (111-11N), both regional (191-19N) and multi-regional (13) bus lines, and a crosspoint switch matrix (37) which serves only to route signals from bus lines (391-39J and 401-40L) to inputs of the logic cells (311-31J) without logically combining two or more of the bus signals, i.e. without forming product terms. Rather, all logic is carried out by the logic cells (311-31J) themselves. In particular, the switch matrix (37) is constructed so that each bus line (391-39J and 401-40L) can connect to one or more logic cell inputs, but each logic cell input can meaningfully connect to only one bus line without shorting. In one embodiment, each logic cell (311-31J) feeds one logic signal back (411-41J) to a regional bus line (191) and can potentially feed back another logic signal through its region's universal select matrix (47) to a universal bus line (13). The select matrix (47) connects a subset of the region's potential feedback signals to the universal bus (13).

IPC 1-7

**G06F 7/38**; H03K 19/173

IPC 8 full level

**G06F 7/00** (2006.01); **G06F 7/57** (2006.01); **G06F 7/575** (2006.01); **H03K 19/173** (2006.01); **H03K 19/177** (2006.01)

CPC (source: EP KR US)

**G06F 7/38** (2013.01 - KR); **H03K 19/1736** (2013.01 - EP US); **H03K 19/1737** (2013.01 - EP US)

Citation (search report)

• No further relevant documents disclosed
• See references of WO 9530952A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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